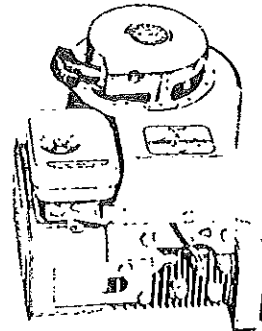
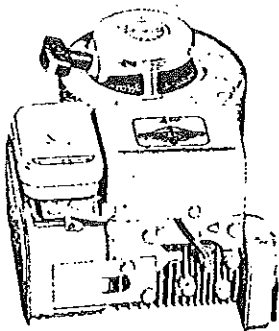


Briggs & Stratton

OPERATING AND MAINTENANCE INSTRUCTIONS MODELS

100900 to 100992
130900 to 130992



IN THE INTEREST OF SAFETY: DO NOT RUN ENGINE AT EXCESSIVE SPEEDS. Operating an engine at excessive speeds increases the hazard of personal injury. **DO NOT TAMPER WITH PARTS WHICH MAY INCREASE THE GOVERNED SPEED.** For rotary lawnmower safety, USA Standard Safety Specifications for Power Lawn Mowers specify a maximum blade tip speed of 19,000 feet per minute, primarily to reduce the hazard from thrown objects.

Rotary lawnmower manufacturers select the governed top speed of the engine based on the length and design of the cutter blade and design of other mower parts.

All rotary lawnmowers should be checked for conformance to the USA Standard Safety Specifications for Power Lawn Mowers on blade tip speed, if the engine is repaired or replaced, or if mower parts are changed.

TO PREVENT ACCIDENTAL STARTING always remove the spark plug before working on the engine or equipment driven by the engine or remove cable from spark plug and insert terminal in V-notch in cylinder head cover.

DO NOT RUN THE ENGINE IN AN ENCLOSED AREA. Exhaust gases contain carbon monoxide, an odorless and deadly poison. **DO NOT FILL GASOLINE TANK WHILE ENGINE IS RUNNING.** Spilling gasoline on a hot engine may cause a fire or explosion.

IN THE INTEREST OF ENVIRONMENT: A muffler which leaks because of rust or damage can permit an increased exhaust noise level. Therefore, examine the muffler periodically to be sure it is functioning effectively. To purchase a new muffler see Section 6.

WARNING: If this engine is to be run in dry forest covered, brush covered or grassy areas which could catch fire from a spark leaving a muffler, we recommend that the engine be equipped with a spark arrester muffler. See your Briggs & Stratton dealer for spark arrester muffler options.

Section 1 BEFORE STARTING

READ THE OPERATING INSTRUCTIONS OF THE EQUIPMENT THIS ENGINE POWERS

① **FILL CRANKCASE WITH OIL** — Use a high quality detergent oil classified "For Service SC, SD, SE or MS". Nothing should be added to the recommended oil.

SUMMER - (Above 40° F.) Use SAE 30
If not available, Use SAE 10W-30 or SAE 10W-40
WINTER - (Under 40° F.) Use SAE 5W-20 or SAE 5W-30
If not available, Use SAE 10W or SAE 10W-30
Below 0° F, Use SAE 10W or SAE 10W-30,
Diluted 10% with Kerosene.

DIRECTIONS: Place the engine level. Remove oil filler plug or Oil-Minder. **FILL THE OIL SUMP TO OVERFLOWING** or to the **FULL** mark on dipstick. **POUR SLOWLY.** Capacity 1-3/4 pints.

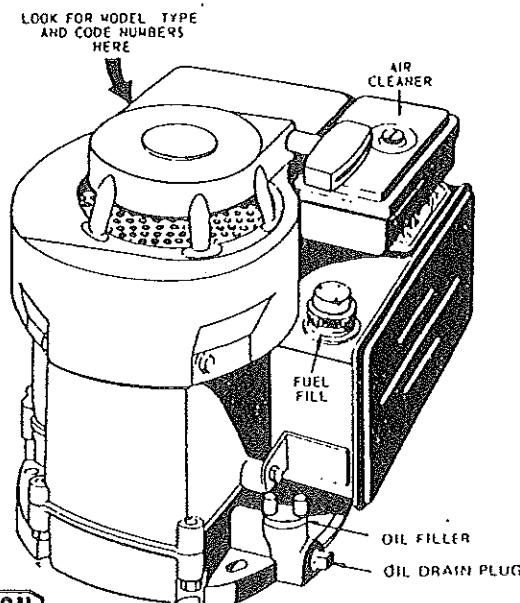
EXTENDED OIL FILL. (Optional) Remove cap and dipstick and fill to full mark on dipstick. When checking oil level push dipstick assembly firmly but slowly until cap bottoms on tube. Do not overfill. Dipstick assembly must be pushed fully into tube at all times when engine is operating.

② **FILL FUEL TANK** — Use clean, fresh, lead-free, or leaded "regular" grade automotive gasoline. **DO NOT MIX OIL WITH GASOLINE.**

CAUTION: Gasoline is highly combustible. Do not store or use gasoline near an open flame or devices

such as a stove, furnace, or water heater. Use gasoline only in well ventilated areas or outdoors.

Fill tank completely. Do not overfill or spill. Wipe up any spills immediately.

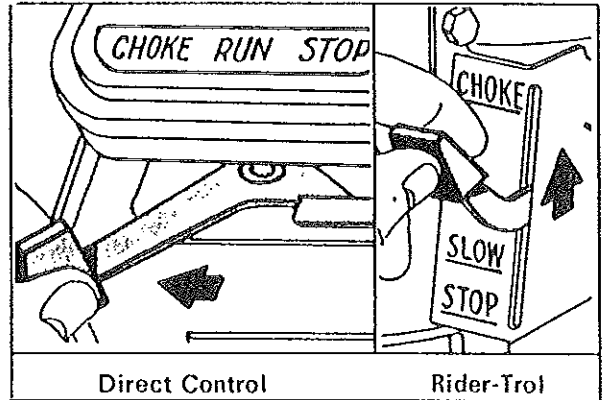
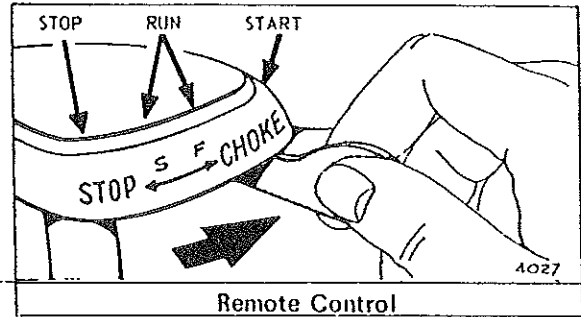


BRIGGS & STRATTON CORP.
Milwaukee, Wisconsin 53201

Section
2 **STARTING**

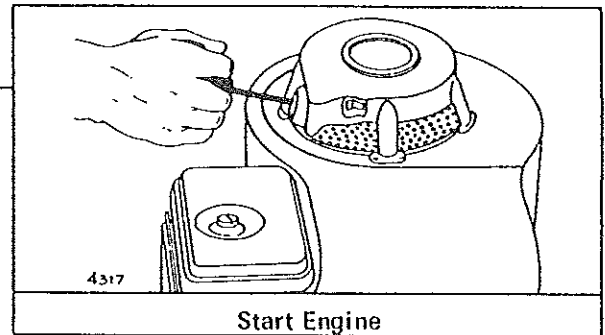
When engine is mounted on a tiller, start, store, and fuel in a level position or with spark plug end slightly elevated.

- 1 **CHOKE ENGINE** – Move control as far as possible toward "choke" or "start" position. Engine may be equipped with Remote, Direct or Rider-Trol controls.



- 2 **START ENGINE** – Grasp starter handle as illustrated and pull out cord rapidly. Return it slowly to the engine.

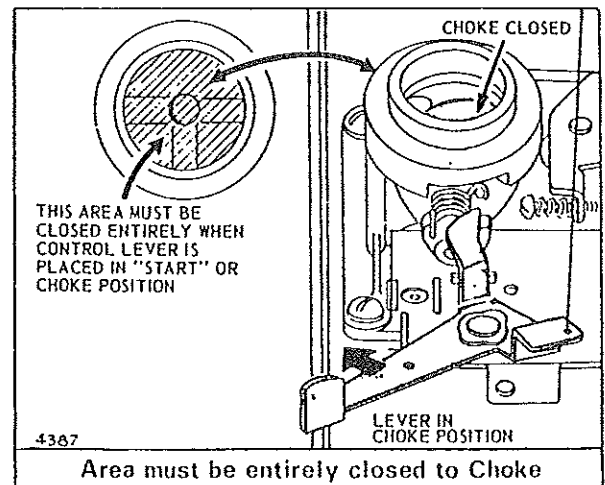
Repeat if necessary.



NOTE: Engine MAY NOT START if remote controls on equipment do not close choke fully as illustrated below. See remote control adjustment instructions. See Section 4.

CAUTION: ALWAYS KEEP HANDS AND FEET CLEAR OF MOWER BLADE OR OTHER ROTATING MACHINERY.

- 3 **STOP ENGINE** – Move control lever to "Stop" Position.

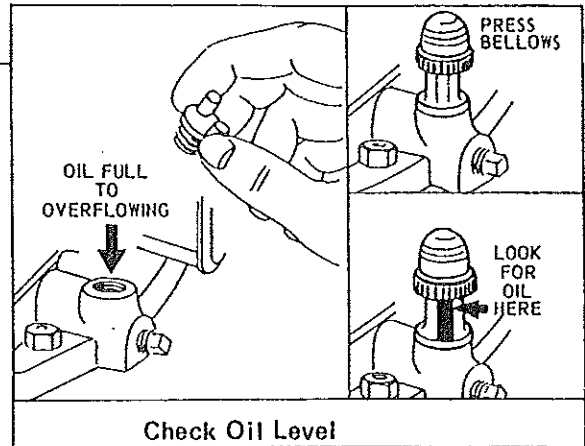


- ① **CHECK OIL LEVEL** before starting engine and after every 5 hours of operation.

ADD oil as necessary to keep level FULL TO POINT OF OVERFLOWING or to FULL mark on dipstick.

Before removing oil fill plug, clean area around plug to prevent dirt from entering oil fill hole.

Engine should be in a level position when checking oil. OIL MINDER (Optional) – Press and release bellows. If oil fills clear plastic tube, level is OK. If oil does not fill tube, add oil.

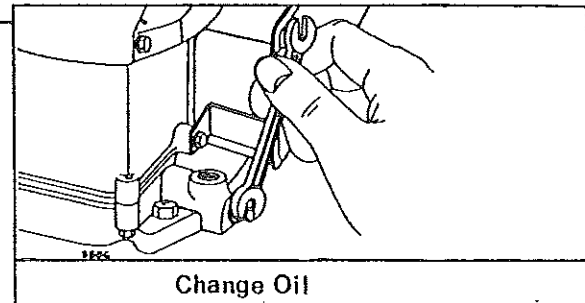


Check Oil Level

- ② **CHANGE OIL** after first 5 hours of operation. Thereafter change oil every 25 hours. Change oil while engine is warm. Oil may be drained thru oil drain on bottom of engine. To drain completely, always place engine level when draining thru the bottom. Oil may also be drained thru oil fill hole or extended oil fill tube by tipping the engine.

When tipping, empty fuel tank and keep engine spark plug or muffler side up.

Oil capacity 1 3/4 Pints.



Change Oil

- ③ **CLEAN AIR CLEANER AND RE-OIL ELEMENT** every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions.

1. Remove screw.
2. Remove air cleaner carefully to prevent dirt from entering carburetor.
3. Take air cleaner apart and clean.
 - A – Wash foam element in kerosene or a liquid detergent and water to remove dirt.
 - B – Dry foam completely by wrapping and squeezing in a cloth.
 - C – Soak foam with engine oil. Squeeze to distribute and remove excess oil.
4. Reassemble parts and fasten to carburetor.

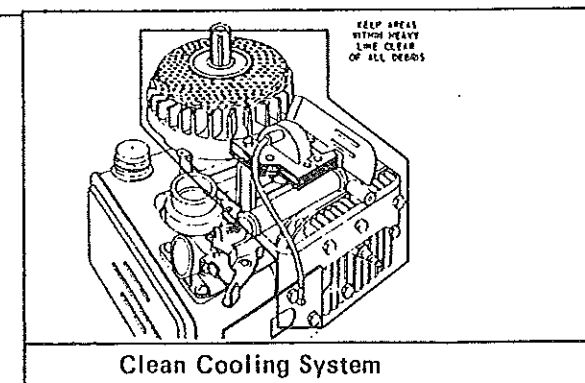


Clean and re-oil Air Cleaner

- ④ **CLEAN COOLING SYSTEM** – Grass, chaff or dirt may clog the air cooling system, especially after prolonged service cutting dry grasses. To avoid overheating and engine damage, remove the blower housing and clean the area shown. This should be a regular maintenance operation.

- ⑤ **CLEAN SPARK PLUG** and reset gap at .030" every 100 hours of operation.

CAUTION: Blast cleaning of spark plugs in machines that use abrasive grit is not recommended. Spark plugs should be cleaned by scraping or wire brushing and washing with a commercial solvent.



Clean Cooling System

REMOTE CONTROL ADJUSTMENT

Proper choke and stop switch operation is dependent upon proper adjustment of remote controls on the powered equipment.

To Check Operation:

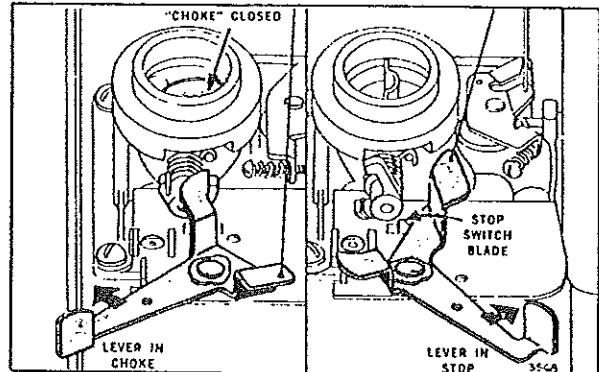
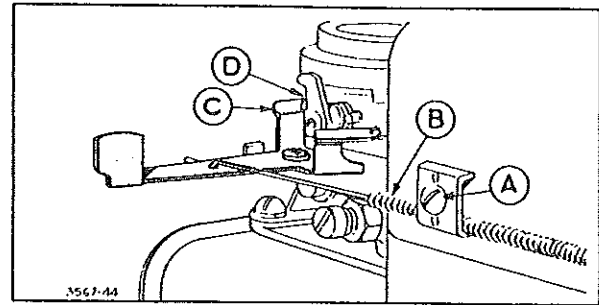
Remove Air Cleaner. Move remote control lever to CHOKE position. The carburetor choke should then be closed. Move the remote control lever to STOP. Control lever on carburetor should then make good contact with stop switch to short out ignition.

To Adjust:

Place remote control lever on equipment in FAST (high speed) position.

Lever C on carburetor should be just touching choke arm at D. To adjust, loosen casing clamp screw A on blower housing. Move control casing B forward or backward until correct position is obtained. Tighten screw A.

Recheck operation of controls after adjustment. Replace air cleaner.



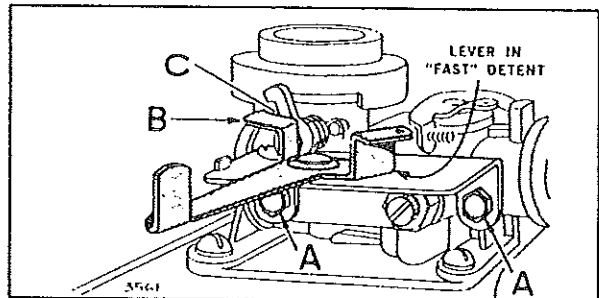
MANUAL CONTROL ADJUSTMENT

Move control lever to left as far as possible. Choke should be fully closed. Now move control lever to right as far as possible. Stop switch blade should make contact with control lever.

If choke does not close completely or stop switch does not make contact, control plate must be re-adjusted.

To Adjust Manual Control:

Move lever to left until it snaps into run detent. Lever "B" should just touch choke arm at "C". If it does not, loosen screws "A" slightly and move control plate to right or left until lever just touches choke arm at "C". Tighten screws "A".



CARBURETOR ADJUSTMENTS

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude and load.

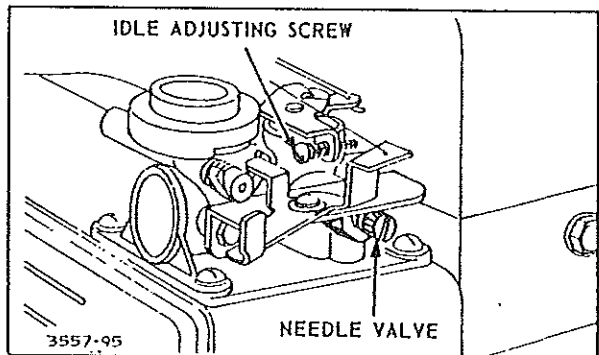
Initial Adjustment:

Turn needle valve clockwise to close it. Then open 2 turns. This initial adjustment will permit the engine to be started and warmed up before making final adjustment.

Final Adjustment:

With engine running at normal operating speed (approximately 3000 RPM without load) turn needle valve clockwise until engine starts to lose speed (lean mixture). Then slowly turn needle valve counterclockwise past the point of smoothest operation, until engine just begins to run unevenly. This mixture will give best performance under load.

To check adjustment move engine control from SLOW to FAST speed. If engine tends to stall or die out, it usually indicates that the mixture is slightly lean and it may be necessary to open the needle valve slightly to provide a richer mixture. This richer mixture may cause a slight unevenness in idling.



GENERAL INFORMATION

ENGINE DESIGN

Your engine is 4 cycle, single cylinder and L-head. It is air cooled.

MODEL SERIES – 100900

Bore 2 1/2"
Stroke 2 1/8"
Displacement 10.4 cu. in.
Horsepower Max. 4.0 @ 3600 RPM
Torque (Ft. Lbs.) Max. 5.93 @ 3050 RPM

MODEL SERIES – 130900

Bore 2 9/16"
Stroke 2 7/16"
Displacement 12.57 cu. in.
Horsepower Max. 5.0 @ 3600 RPM
Torque (Ft. Lbs.) Max. 7.66 @ 3100 RPM

The horsepower ratings listed above are established in accordance with the Society of Automotive Engineers Test Code-J607. For practical operation, the horsepower loading should not exceed 85% of these ratings. Engine power will decrease 3 1/2% for each 1,000 feet above sea level and 1% for each 10° above 60° F.

Major engine repairs should not be attempted unless you have the proper tools and a thorough knowledge of internal combustion engines.

TUNE-UP SPECIFICATIONS

Spark Plug Type	A.C.	Autolite	Champion
Short Plug	CS-45	A7N	CJ-8
Long Plug	GC-46	A71	J-8
Spark Plug Gap030"	
Ignition Point Gap020"	
Intake Valve Clearance005"-.007"	
Exhaust Valve Clearance009"-.011"	

CAUTION: Blast Cleaning of spark plugs in machines that use abrasive grit is not recommended. Spark plugs should be cleaned by scraping or wire brushing and washing with a commercial solvent or gasoline.

STORAGE INSTRUCTIONS

Engines to be stored over 30 days should be completely drained of fuel to prevent gum deposits forming on essential carburetor parts, and tank.

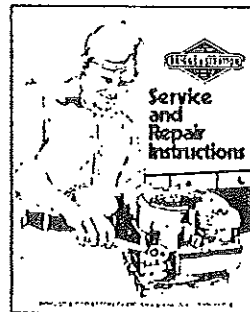
- All fuel should be removed from fuel tank. Run the engine until it stops from lack of fuel. The small amount of fuel that remains in the sump of the tank should then be removed by absorbing it with a clean dry cloth.
- Remove spark plug, pour 1 ounce (2 or 3 tablespoons) of SAE-30 oil into cylinder and crank slowly to distribute oil. Replace spark plug.
- Clean dirt and chaff from cylinder, cylinder head fins and blower housing.

SERVICE & REPAIR INFORMATION

If service or repair is needed, contact an Authorized Briggs & Stratton Service Center. To serve you promptly and efficiently, the Service Center will need the model, type and code number on your engine. (See Section 7).

Each Authorized Service Center carries a stock of original Briggs & Stratton repair parts and is equipped with special service tools. Trained mechanics assure expert repair service on all Briggs & Stratton engines.

Your nearest service center is listed in the 'Yellow Pages' under "Engines, Gasoline" or "Gasoline Engines". He is one of over 15,000 authorized dealers available to serve you.



This illustrated book includes "Theories of Operation", common specifications, and detailed information covering the adjustment, tune-up and repair procedures for 2 through 16 H.P. models. It is available from any Authorized Briggs & Stratton Service Center. Order as Part Number 270962.

